

REMARKS/ARGUMENTS

Claim Amendments

The Applicant has amended claims 1, 6-14, 16-18, 20 and 22-23. Applicant respectfully submits no new matter has been added. Accordingly, claims 1-23 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-15 and 17-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Navin Chaddha (2003/0061368) (Chaddha hereafter) and Siamak Naghian (2004/0102195) (Naghian hereafter). The Applicant respectfully traverses the rejection of these claims. Support for the amendments to the independent claims may be found on page 14, line 4 – page 15, line 15.

The present invention aggregates feedback messages regarding distribution characteristics of a data stream to multiple clients in a communication system. The Claims and the Specification mention “aggregation fashion”. The term “fashion” is used in the present invention to indicate a way or technique of aggregation and for clarity’s sake the Applicant has used the term “technique” instead of “fashion”. There are three entities disclosed with the amendments to the claims: a server, a group of clients and an intermediate network part. The intermediate network part is defined in the above cited support as “...a functionality, which can be implemented in one node, in the following described as intermediate node or the functionality can be split between different network nodes.”

In the present state of the art, in the case of multicasting a message, a message is sent from a server to a number of clients. Every client sends a feedback message, which could be a flood of messages to the server at the same time. The Applicant’s present invention helps reduce the potential that the server might be overloaded when receiving feedback messages from all the clients in response. In the present invention, a feedback report, which applies to the feedback messages from a group of clients, is generated by the intermediate network part (node) by combining, or aggregating, all the

feedback messages from the clients that received the initial multicast message into the feedback report and then sending the report to the server that is providing the data stream. The server uses the report to adapt the characteristics of the transmission of data to the client needs.

The Applicant respectfully directs the Examiner's attention to amended claim 1:

1. (Currently Amended) A method for adapting multi-user multimedia data in a communication system with a server providing the multi-user multimedia data to a group of clients, comprising the steps of:

providing information on distribution characteristics to an intermediate network part between the server and the group of clients, wherein the intermediate network part is a functionality implemented in one or more nodes;

sending a data stream, via the intermediate network part containing the multi-user multimedia data from the server to the group of clients;

determining real time distribution characteristics, regarding the data stream, associated with the group of clients;

generating a feedback report on the group of clients' reception conditions of the data stream, considering the distribution characteristics, said feedback report comprising a client group structure, an aggregation of the real time distribution characteristics of all clients in the group and additional information regarding the :

sending the feedback report to the server; and

adapting transmission of the data stream from the server to the group of clients according to the feedback report.

The Applicant respectfully submits that the Chaddha and Naghian references do not, individually or in combination disclose all the limitations of claim 1.

The Chaddha reference states that "the server streams the multimedia data... via a multicast group address...the client computers provide feedback about the usage and or/need for the multimedia data to the server." Chaddha specifically discloses that every client (computer) sends a feed back message directly to the server not to an intermediate node. The Applicant submits that no combining of feedback messages are disclosed in the Chaddha reference.

The Naghian reference discloses broadcasting, especially where Naghian concentrates on a provision of location information of the users to whom information is to be broadcast. A broadcast transmission is distributed to end users (TV, radio, etc.) without any feedback channel. The cited portion of Naghian discusses tariff rates

according to a geographical area. In this portion of Naghian distribution characteristics are not determined. Neither does the Naghian reference discuss or disclose the generation of a feedback report which comprises a combination (aggregation) of responses from the group of clients.

Therefore, the Chaddha and Naghian references fail to disclose at least the limitations regarding generating and sending to the server a feedback report regarding multiple clients' distribution characteristics. This being the case, the Applicant respectfully requests the allowance of claim 1. Claim 20 is analogous to claim 1 and contains similar limitations and the Applicant respectfully requests the allowance of claim 20.

Claims 2-14, 17-19 and 21-23 depend from claims 1 and 20 respectively and recite further limitations in combination with the novel elements of claims 1 and 20. Therefore, the allowance of claims 1-15 and 17-23 is respectfully requested.

Claim 16 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Chaddha (2003/0061368) and Naghian (2004/0102195) in view of Zhu et al (5,768,527) (Zhu hereafter). The Applicant respectfully traverses the rejection of these claims.

The Zhu reference is cited for providing a fraction of lost packets by the intermediate node depending on conditions of delivery. The Applicant submits, as discussed above, that the Chaddha and Naghian references lack the limitations regarding the aggregation of packets from client computers to send to the server and Zhu, when added to the mix, does not make up the difference. The Applicant respectfully submits that Zhu does not supply the limitations that are lacking in the Chaddha and Naghian references. So, claim 16 recites further limitations in combination with the novel elements of claim 1 and the Applicant respectfully requests the allowance of claim 16.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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